

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

CONDITIONAL MAJOR DRAFT PERMIT F-01-018

THE NIELSEN COMPANY

FLORENCE, KENTUCKY

SEPTEMBER 7, 2001

STEPHANIE RHODES, REVIEWER

PLANT I.D. #21-015-00082

APPLICATION LOG #53160

SOURCE DESCRIPTION:

The Nielsen Company in Florence, KY, produces printed papers with six heatset presses and five sheetfed presses. The activities at each press include use of inks and fountain solutions during production print runs and use of solvents during cleanup operations. Inks, solvents, and fountain solutions are the major raw materials that generate emissions of volatile organic compounds including low levels of hazardous air pollutants.

WEB PRESSES :

Each web press must go through five distinct operations in order to produce printed sheets:

- 1) Static set up mode-the machine is prepared to initiate production. There are no emissions from this process.
- 2) Dynamic set-up stage- involves the slow movement of the printing cylinders to place ink on paper to begin fine tuning the image area. The chemicals used in this stage include ink and fountain solution.
- 3) Run mode-the main operation of the press involving the production of printed sheets at the maximum attainable speed; as a result, the press is consuming and emitting VOC's at its fastest pace.
- 4) Wash-up operation-involves the use of wash-up solution to remove ink and fountain solution from the previous run.
- 5) Maintenance mode-a static process in which the press is maintained for efficiency and errors are corrected.

EMISSION POINTS 02, 03, 04, 06, 12, AND 13:

Nielsen is currently operating six web heatset, offset lithographic presses with natural gas dryers. Each web press must go through four basic processes in order to complete the task of producing printed sheets. These machine points apply to each web press:

MP1: Ink usage

VOC content = 35% by weight

MP2: Fountain solution

VOC = 1.05 lb/gal

MP3: Wash-up solvent

VOC content = 6.57 lb/gal

MP4: Natural gas dryer

Particulate emissions are insignificant.

SHEETFED PRESSES

The sheetfed presses will use similar fountain solution and wash-up chemicals as the web presses. However, since sheetfed operations do not require ovens or heat setting, the paper retains 95% of the inks and fountain solutions, thus significantly reducing emissions. Additionally, sheetfed production speeds are much lower than that of the web presses, which also reduces emissions by reducing chemical consumption.

Each sheetfed press must go through four processes in order to run efficiently:

- 1) Set-up mode-a static operation, in which plates are hung, adjustments are made, registration set, etc. There are no emissions from this process.
- 2) The run mode-ink is applied to sheeted paper, consuming ink and fountain solution
- 3) Wash-up mode-a necessary clean-up function between print jobs and occasional cleaning of the blankets during longer print runs. Wash-up solution is consumed.
- 4) Maintenance mode- a static mode where the press is maintained for efficiency and job problems and inputs are corrected. There is no consumption of chemicals.

EMISSION POINTS 07, 08, 09, 10, AND 11:

Nielsen is currently operating five sheetfed, non-heatset lithographic presses. Each press must go through three basic processes in order to complete the task of producing printed sheets. These machine points apply to each sheetfed press:

MP1: Ink usage

VOC content = 19.1% by weight

MP2: Fountain solution

VOC = 5.67 lb/gal

MP3: Wash-up solvent

VOC content = 6.76 lb/gal

Insignificant Activities

The company is adding one, small 29" Miehle 129 sheetfed press to the facility. This press only used for one customer and one job. This press is currently located at the Ohio plant but will be moved to the Florence location. Actual emissions for the sheetfed press in 2000 were 0.19 tons. Therefore, according to 401 KAR 52:020 Section 6, it is an insignificant activity.

EMISSION FACTORS

AP-42

Engineering calculations

APPLICABLE REGULATION

401 KAR 63:060. List of hazardous air pollutants, petitions process, lesser quantity designations, and source category list.

EMISSION AND OPERATING CAPS

VOC emissions shall be less than 99 tons during any consecutive twelve (12) month period. Monthly records to demonstrate compliance with this limitation shall be maintained, and total VOC emissions shall be reported on a quarterly basis.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.